

CLAIMS

1. An elevator apparatus comprising a car raised and lowered within a hoistway, the car having a car frame and a cage supported on the car frame, wherein:

the cage has a chamfered portion provided at a corner portion of the cage; and

the car frame has a vertical column arranged along the chamfered portion.

2. The elevator apparatus according to Claim 1, wherein:

the chamfered portion comprises a first chamfered portion and a second chamfered portion which are located at diagonal positions of the cage; and

the vertical column comprises a first vertical column disposed along the first chamfered portion, and a second vertical column disposed along the second chamfered portion.

3. The elevator apparatus according to Claim 2, further comprising a first car guide rail and a second car guide rail for guiding raising and lowering of the car, the first car guide rail and the second car guide rail being disposed within the hoistway in opposition to the first vertical column and the second vertical column, respectively.

4. The elevator apparatus according to Claim 3, wherein the first vertical column and the second vertical column have attached thereto a first car guide shoe and a second car guide shoe which engage with the first car guide rail and the second car guide rail, respectively.

5. The elevator apparatus according to Claim 3, wherein:
the first vertical column and the second vertical column each have a groove portion, which extends continuously in a vertical direction, formed in each of faces of the first vertical column and the second vertical column opposed to the first guide rail and the second guide rail, respectively; and

a first car guide shoe and a second car guide shoe, which respectively engage with the first car guide rail and the second car guide rail, are each at least partially disposed within the groove portion.

6. The elevator apparatus according to Claim 3, wherein:
the first vertical column and the second vertical column each have a groove portion, which extends continuously in a vertical direction, formed in each of faces of the first vertical column and the second vertical column opposed to the first guide rail and the second guide rail, respectively; and

the first car guide rail and the second car guide rail are each at least partially disposed within the groove portion.

7. The elevator apparatus according to Claim 3, further comprising a safety device mounted on the car and coming into engagement with the first car guide rail and the second car guide rail to bring the car into an emergency stop, wherein:

the first vertical column and the second vertical column each have a groove portion formed in each of faces of the first vertical column and the second vertical column opposed to the first car guide rail and the second car guide rail, respectively; and

the safety device is at least partially disposed within the groove portion as seen in a vertical projection plane.

8. The elevator apparatus according to Claim 2, wherein the car frame is disposed between upper end portions of the first vertical column and the second vertical column, and has an upper beam that is disposed along a diagonal line of the car as seen in a vertical projection plane.

9. The elevator apparatus according to Claim 2, wherein the car frame is disposed between lower end portions of the first vertical column and the second vertical column, and has a lower beam that is disposed along a diagonal line of the car as seen in a vertical

projection plane.

10. The elevator apparatus according to Claim 1, wherein:
the chamfered portion comprises a first chamfered portion and a second chamfered portion which are located at positions on one diagonal of the cage, and a third chamfered portion and a fourth chamfered portion which are located at positions on the other diagonal of the cage; and

the vertical column comprises a first vertical column, a second vertical column, a third vertical column, and a fourth vertical column which are disposed along the first chamfered portion, the second chamfered portion, the third chamfered portion, and the fourth chamfered portion, respectively.

11. The elevator apparatus according to Claim 10, wherein the car frame comprises a first upper beam disposed between upper end portions of the first vertical column and the second vertical column, and a second upper beam crossing the first upper beam and disposed between upper end portions of the third vertical column and the fourth vertical column.

12. The elevator apparatus according to Claim 10, wherein the car frame comprises a first lower beam disposed between lower end portions of the first vertical column and the second vertical column,

and a second lower beam crossing the first lower beam and disposed between lower end portions of the third vertical column and the fourth vertical column.

13. An elevator apparatus comprising a car raised and lowered within a hoistway, the car having: a car frame including a vertical column; and a cage supported on the car frame, wherein:

the cage has a recess provided in a side face thereof; and

the vertical column is at least partially disposed within the recess.